



Application Serial No.: 10/687,104

First Named Inventor: Anand A. Kekre

Title: System And Method For Recording the Order of A Change Caused By
Restoring A Primary Volume During Ongoing Replication of the Primary
Volume

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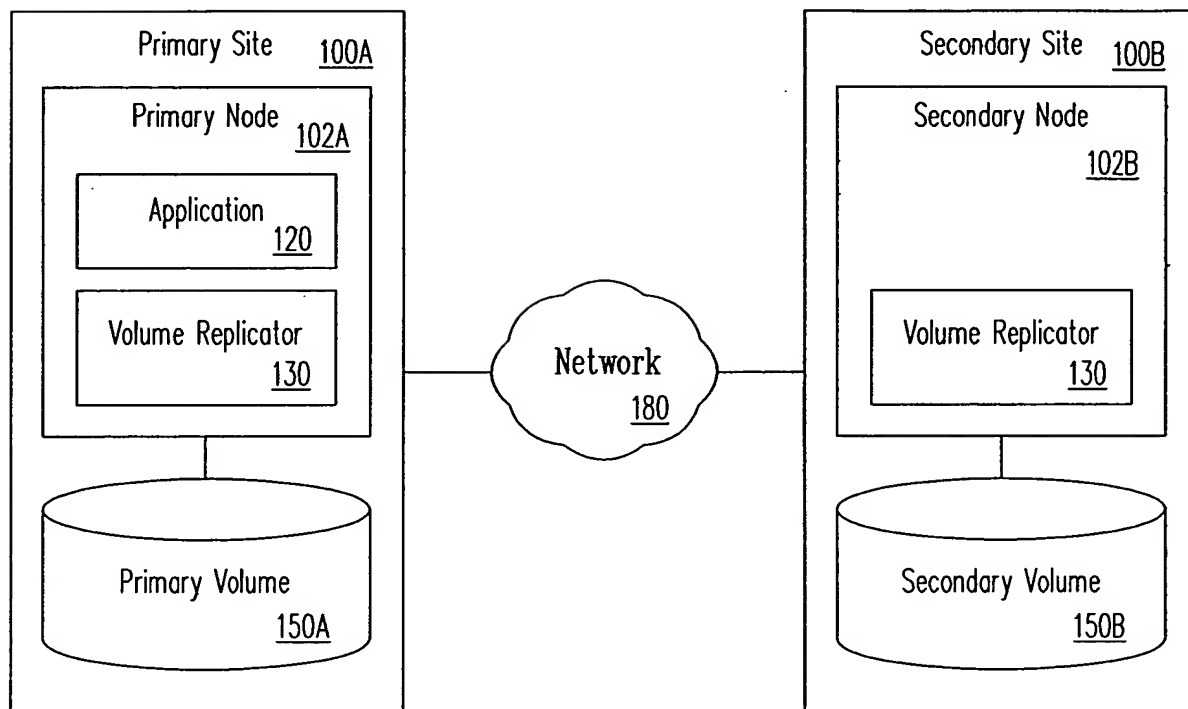


FIG. 1

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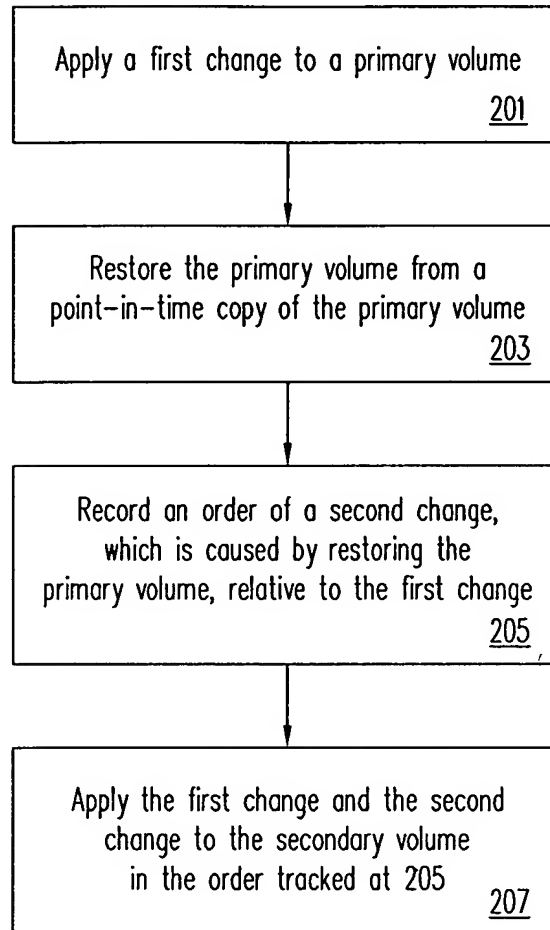


FIG. 2

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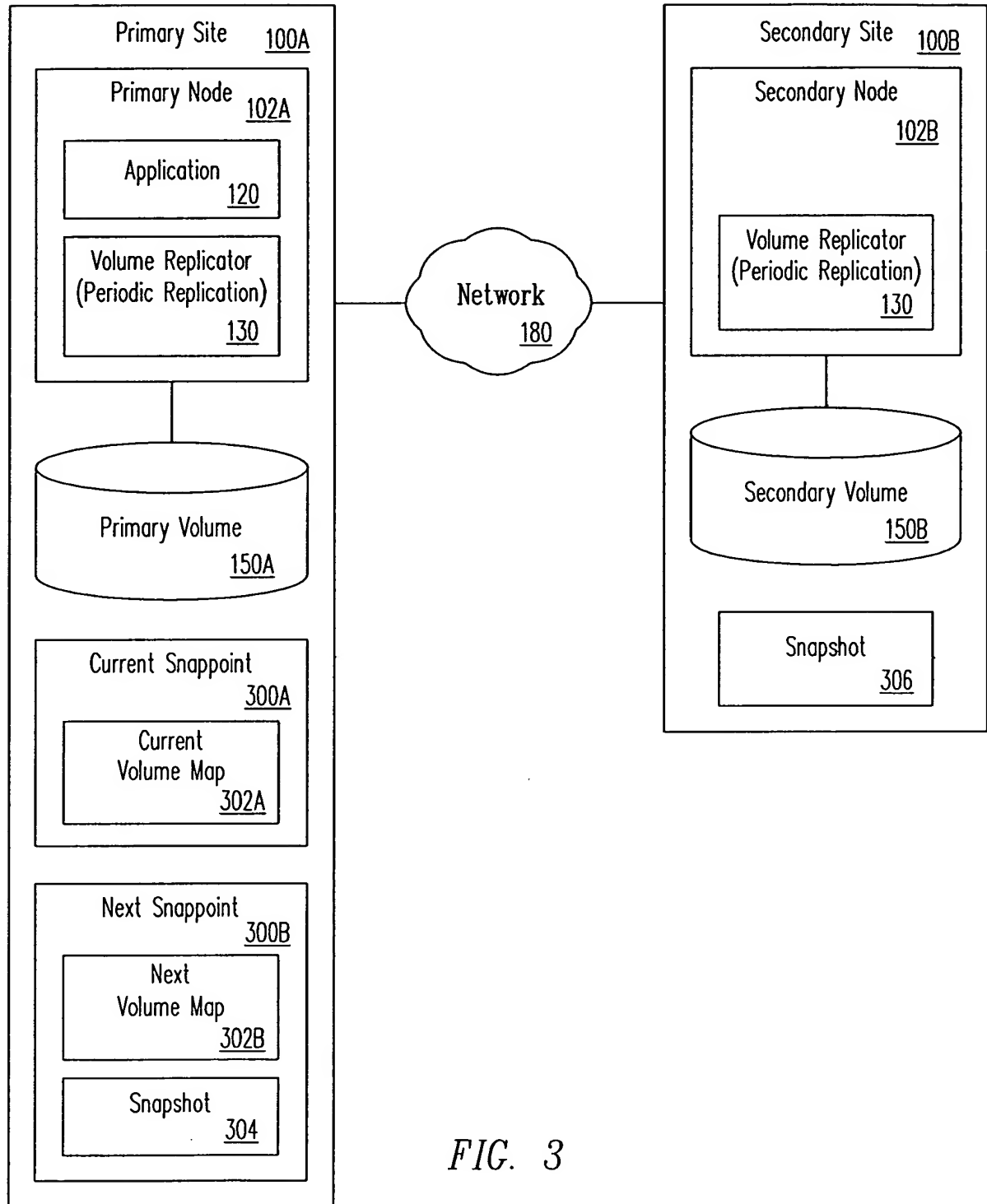


FIG. 3

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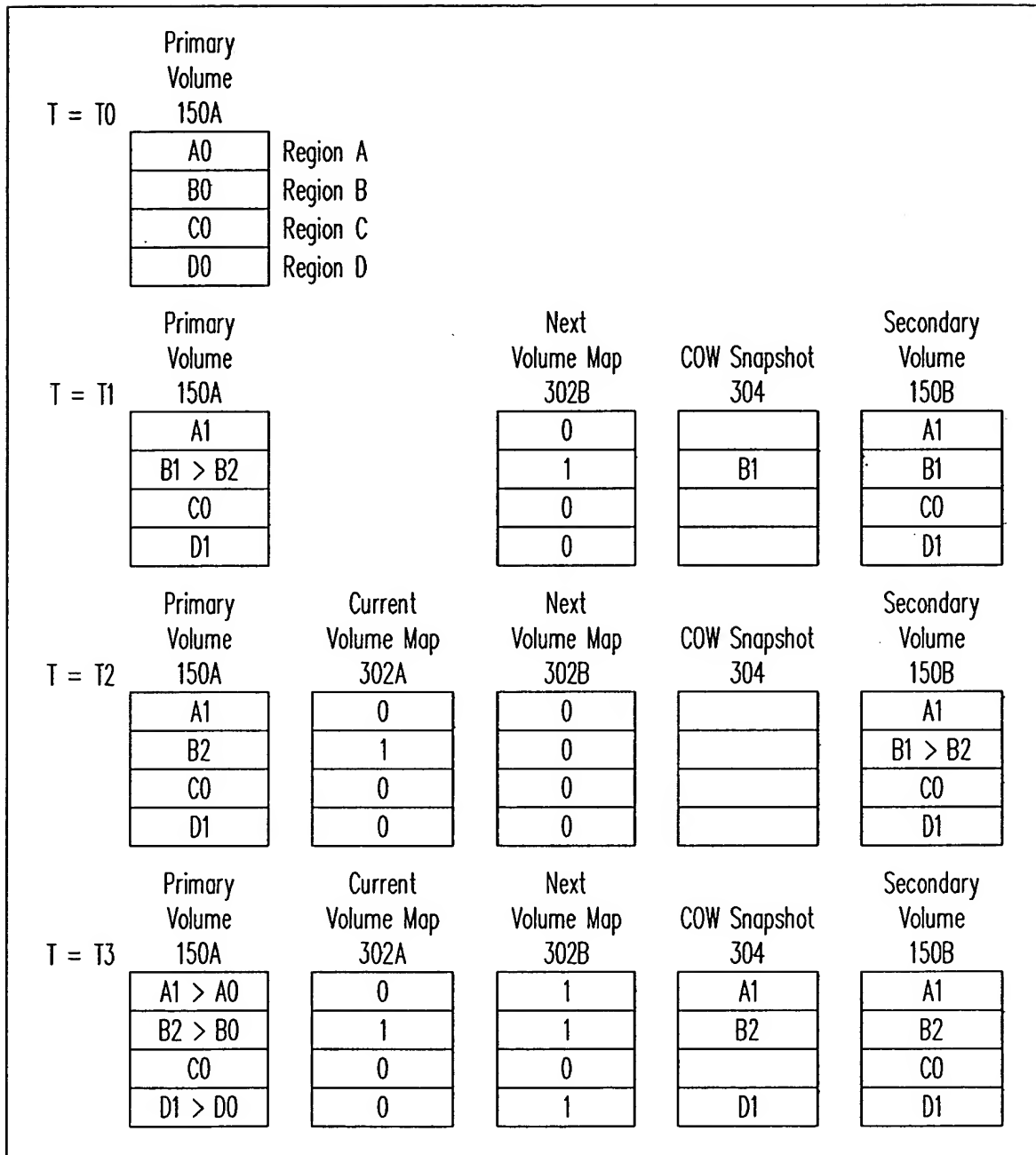


FIG. 4A

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T = T4	<div>Primary Volume 150A</div> <table> <tr><td>A0</td></tr> <tr><td>B0</td></tr> <tr><td>C0 > C1</td></tr> <tr><td>D0</td></tr> </table>	A0	B0	C0 > C1	D0	<div>Current Volume Map 302A</div> <table> <tr><td>0</td></tr> <tr><td>1</td></tr> <tr><td>0</td></tr> <tr><td>0</td></tr> </table>	0	1	0	0	<div>Next Volume Map 302B</div> <table> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> </table>	1	1	1	1	<div>COW Snapshot 304</div> <table> <tr><td>A1</td></tr> <tr><td>B2</td></tr> <tr><td>C0</td></tr> <tr><td>D1</td></tr> </table>	A1	B2	C0	D1	<div>Secondary Volume 150B</div> <table> <tr><td>A1</td></tr> <tr><td>B2</td></tr> <tr><td>C0</td></tr> <tr><td>D1</td></tr> </table>	A1	B2	C0	D1
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T = T5	<div>Primary Volume 150A</div> <table> <tr><td>A0</td></tr> <tr><td>B0</td></tr> <tr><td>C1</td></tr> <tr><td>D0</td></tr> </table>	A0	B0	C1	D0	<div>Current Volume Map 302A</div> <table> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> </table>	1	1	1	1	<div>Next Volume Map 302B</div> <table> <tr><td>0</td></tr> <tr><td>0</td></tr> <tr><td>0</td></tr> <tr><td>0</td></tr> </table>	0	0	0	0	<div>COW Snapshot 304</div> <table> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>					<div>Secondary Volume 150B</div> <table> <tr><td>A1 > A0</td></tr> <tr><td>B2 > B0</td></tr> <tr><td>C0 > C1</td></tr> <tr><td>D1 > D0</td></tr> </table>	A1 > A0	B2 > B0	C0 > C1	D1 > D0
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C0 > C1																									
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T = T6	<div>Primary Volume 150A</div> <table> <tr><td>A0</td></tr> <tr><td>B0 > B3</td></tr> <tr><td>C1 > C2</td></tr> <tr><td>D0</td></tr> </table>	A0	B0 > B3	C1 > C2	D0	<div>Current Volume Map 302A</div> <table> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> </table>	1	1	1	1	<div>Next Volume Map 302B</div> <table> <tr><td>0</td></tr> <tr><td>1</td></tr> <tr><td>1</td></tr> <tr><td>0</td></tr> </table>	0	1	1	0	<div>COW Snapshot 304</div> <table> <tr><td></td></tr> <tr><td>B0</td></tr> <tr><td>C1</td></tr> <tr><td></td></tr> </table>		B0	C1		<div>Secondary Volume 150B</div> <table> <tr><td>A0</td></tr> <tr><td>B0</td></tr> <tr><td>C1</td></tr> <tr><td>D0</td></tr> </table>	A0	B0	C1	D0
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FIG. 4B

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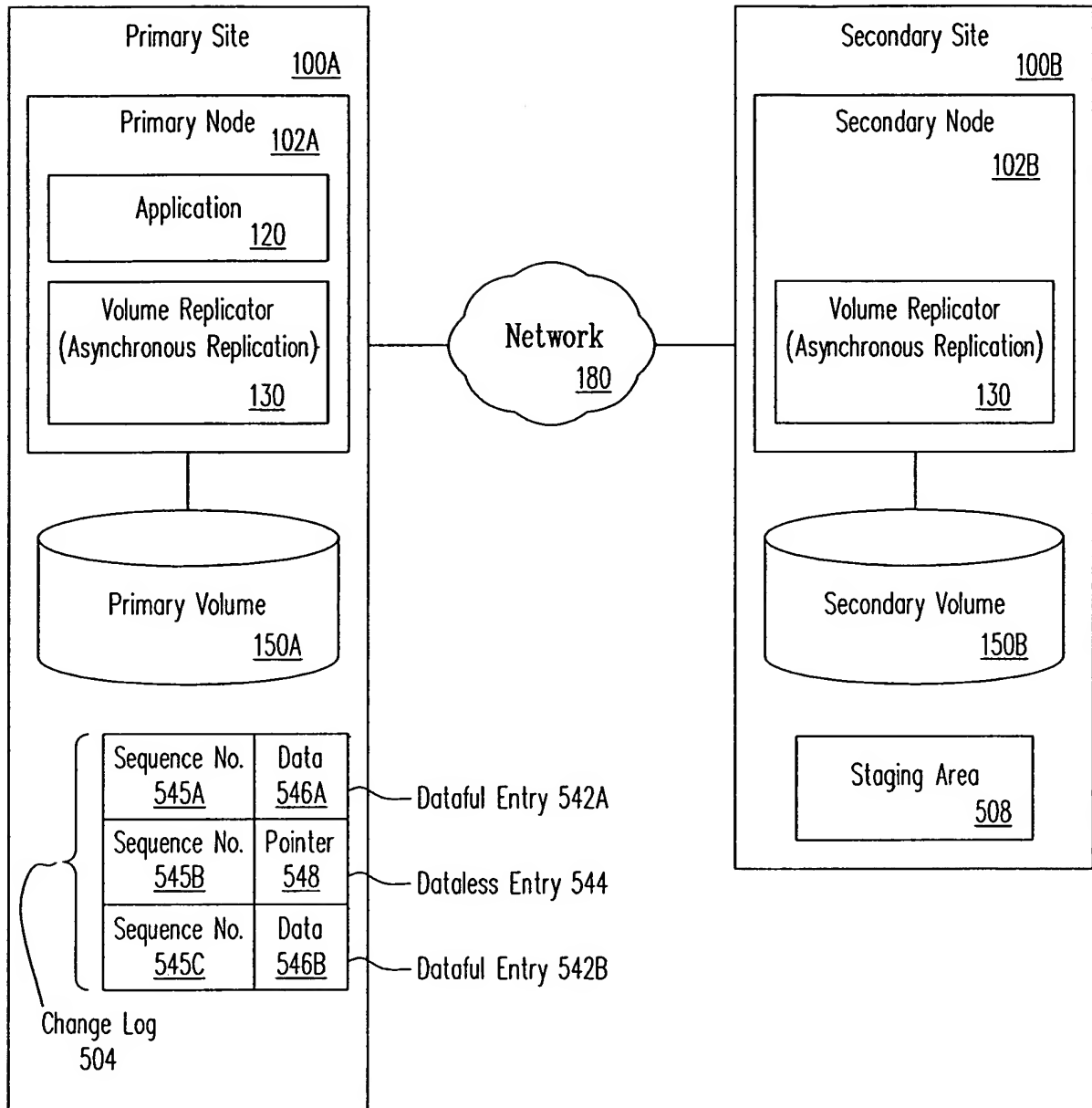


FIG. 5

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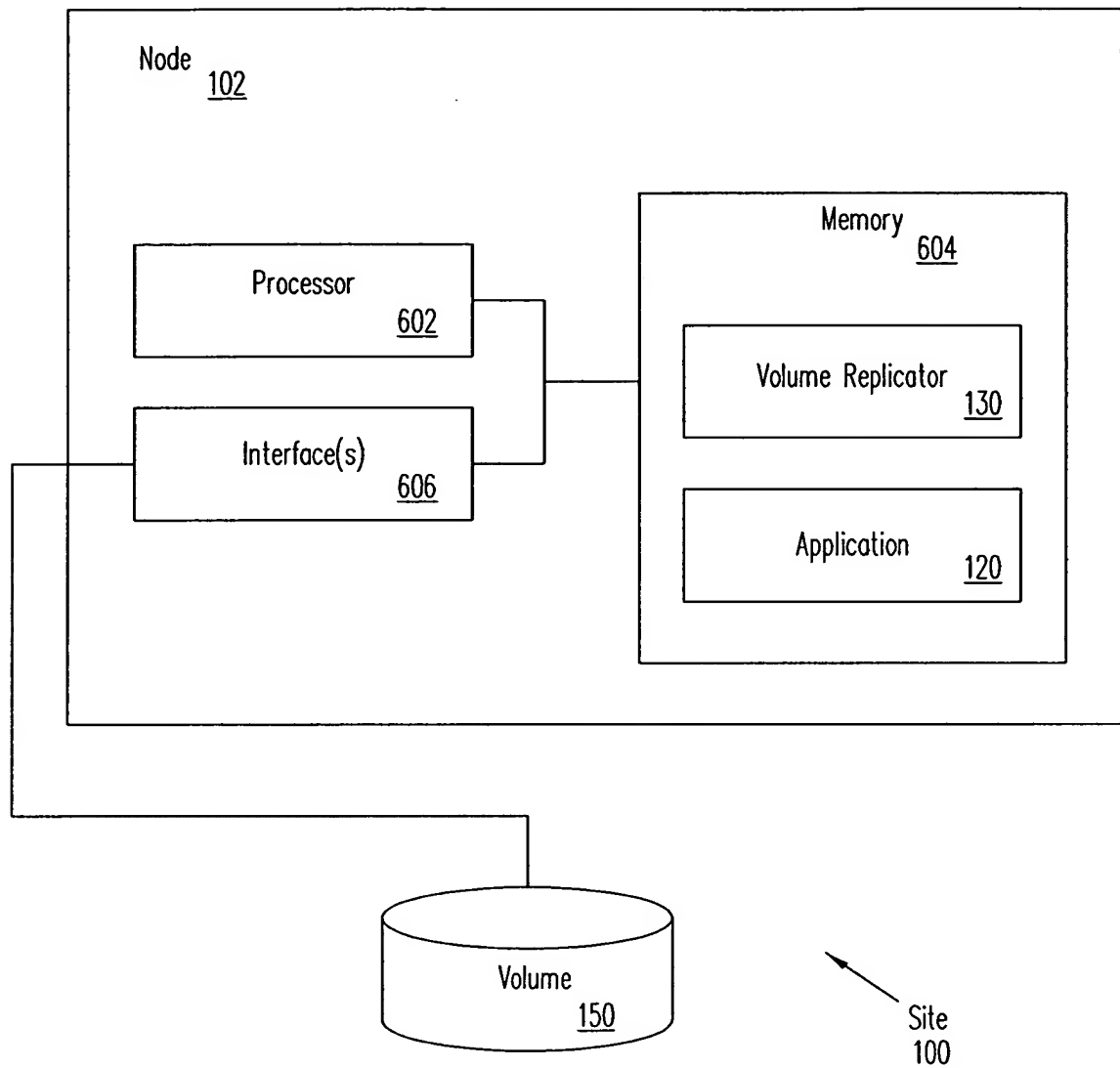


FIG. 6